

Date: Wednesday, 3/7/2007 1:18:53 PM
 User: Kim Johnston

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	407 FWD X-TUBE
Job Number :	31055		
Estimate Number :	12348		
P.O. Number :	N/A	Part Number :	D407667105
This Issue :	3/7/2007	S.O. No. :	N/A
Prsht Rev. :	NC	Drawing Number :	D407-667-145 REV B
First Issue :	N/A	Project Number :	N/A
Previous Run :	30781	Drawing Revision :	N/A
		Material :	N/A
Written By :		Due Date :	3/23/2007
Checked & Approved By :		Qty:	1 Um: Each
Comment :	Est Rev: F05.09.01 Add holes for compatibility with Bell Skidtubes K/J/JLM		

Additional Product

Job Number:



Seq. #

Machine Or Operation:

Description :

1.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D206-667-105 CHG002

KJ 07.03.09

Each

2.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

PULL FROM STOCK

1 X D407-667-105 B 19135 CHG001

1 X D407-667-105 B CHG001

07-07-29

3.0

D407667105

FWD Crosstube



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

FWD Crosstube

4.0

D2856400

Abrasion Strip



Comment: Qty.: 1.2138 f(s)/Unit Total: 1.2138 f(s)

Pick:

Qty Part number Description Batch

2 D2856-400(Cut to 6.94") Abrasion Strip

5.0

D2873043

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-043 Nut Plate

B31192

07-03-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 3/7/2007 1:18:53 PM
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 407 FWD X-TUBE

Job Number: 31055

Part Number: D407667105

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

D2873045

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number

Description Batch

2 D2873-045

Nut Plate

B29107

RT 07-03-29

7.0

D28911

Support 2.25 dia



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number

Description Batch

2 D2891-1

Support

N/A

already on tube

8.0

MS20601AD4W10

RIVET



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

Pick:

Qty Part number

Description Batch

14 MS20601AD4W10 Rivet

M103395

RT 07-03-29

9.0

MS2192020

Clamp (per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part number

Description Batch

4 MS21920-20

Clamp

N/A

already on tube

10.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install abrasion strips as per QSI 035 using DT8579. Note: (3) top holes should be facing up.

2-Install supports and clamps as per Dwg D407-667-145. Torque clamps to 80-100 in lb

3-Install nut plates as per Dwg D407-667-145. Touch-up rivet heads with Imron paint.

RT 07-03-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 407 FWD X-TUBE

Job Number: 31055

Part Number: D407667105

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

207-04-30

12.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING
REPAINT CUFFS

4E 07-04-30

13.0

QC14

Inspect Spray Paint



Comment: Inspect Spray Paint

07 05 01

(1)

14.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Pick Packing Kit

PC 7/5/01

15.0

AN532A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)
Bolt
Batch: *M102115*

16.0

MS21042L5

Nut



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)
Nut
Batch: *M102536*

17.0

AN510A

Bolt



Comment: Qty.: 10.0000 Each(s)/Unit Total: 10.0000 Each(s)
Batch: *M102404*

18.0

AN530A

BOLT



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)
Pick:Packing Kit
Qty Part number Description Batch
4 AN5-30A Bolt *M103389*

PC 7/05/01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Drawing Name: 407 FWD X-TUBE

Job Number: 31055

Part Number: D407667105

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

AN960JD516

Washer



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Pick: Packing Kit

Qty Part number Description Batch

18 AN960JD516 Washer

M/03691

07/15/01

20.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

07/15/01

21.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D407-667-105

Location: _____

PPP Rev: _____

Rev B

07/15/01

22.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

07/15/02

Job Completion



DART		TEL: 1-613-632-3336 FAX: 1-613-632-4443	
TRANSPORT CANADA APPROVAL #00949			
P/N	D407-667-105	CHG	CHG001
DESC	Crosstube Fwd High	SIC	SH01-5
LOT	B19135	SIC	SR01304NY
MODEL	Bell 407		
MADE IN CANADA			

07/15/02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

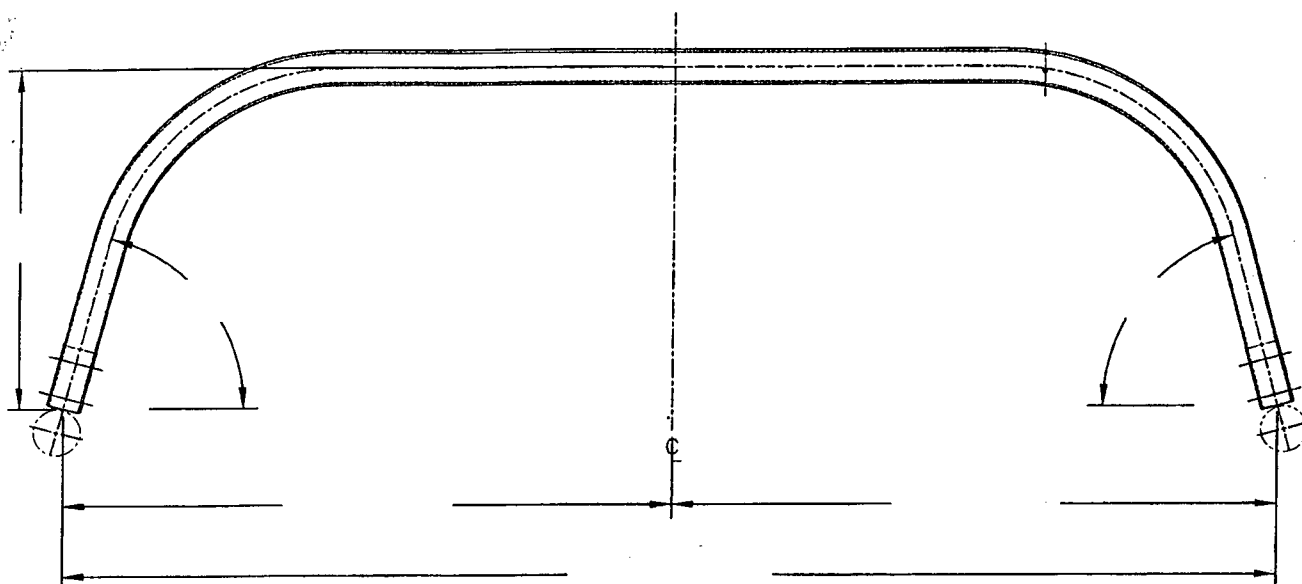
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	31055
Description: Crosstube High Fwd (407)		Part Number:	D407-667-105
Inspection Dwg: D407-667-145 Rev: B		Page 1 of 1	

Required Dimension	Min	Max
Height	23.48	23.60
1/2 Span	45.88	46.0
Angle	54	56
Total Span	91.76	92.0



Comments

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	<i>[Signature]</i>



DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED DS	APPROVED DS	DRAWING NO. D407-667-145	REV. B SHEET 1 OF 3
DATE 05.07.26		TITLE CROSSTUBE ASS'Y (407 HIGH FWD)	SCALE NTS
A	02.05.08	NEW ISSUE	
B	05.07.26	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	

RELEASED
05.07.26

UNDER REVIEW

06.08.10
re draw detail

PH
07.03.08

Qty	Part Number	Description
X	D407-667-145	CROSSTUBE ASSEMBLY (407 HIGH FWD)
1	D6010-115	CROSSTUBE
2	D2856-400-694	ABRASION STRIP
2	D2873-043	NUT PLATE
2	D2873-045	NUT PLATE
2	D2891-1	SUPPORT
14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
4	MS21920-20	CLAMP

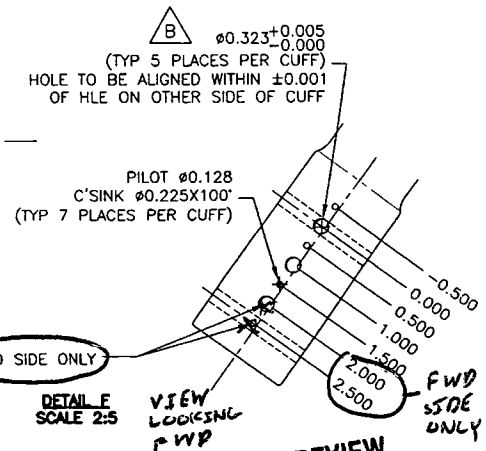
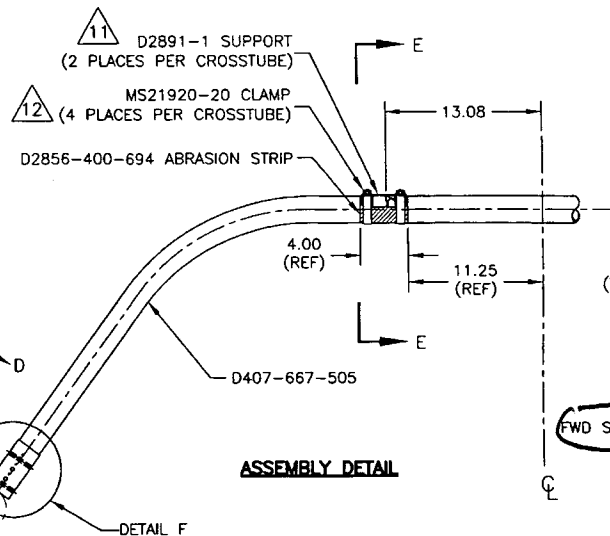
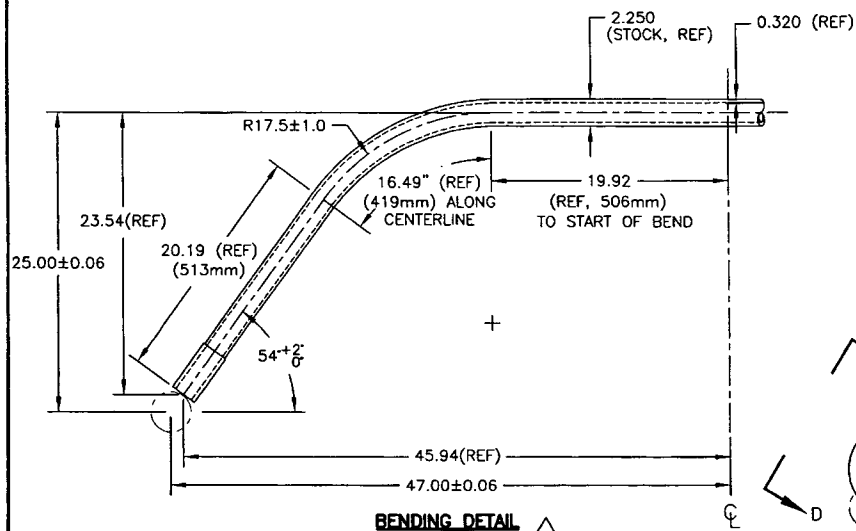
GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6010-115
FINISHED LENGTH = 113.20 ± 0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 6 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-694 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2891-1 SUPPORT, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) SEAL EDGES OF SUPPORTS AND ABRASION STRIP USING SIKAFLEX-241/291 SEALANT (OPTIONAL).
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

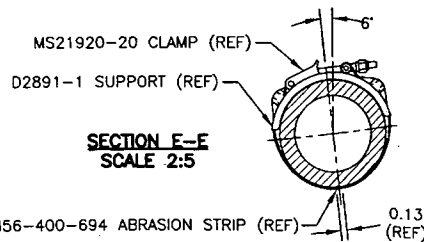
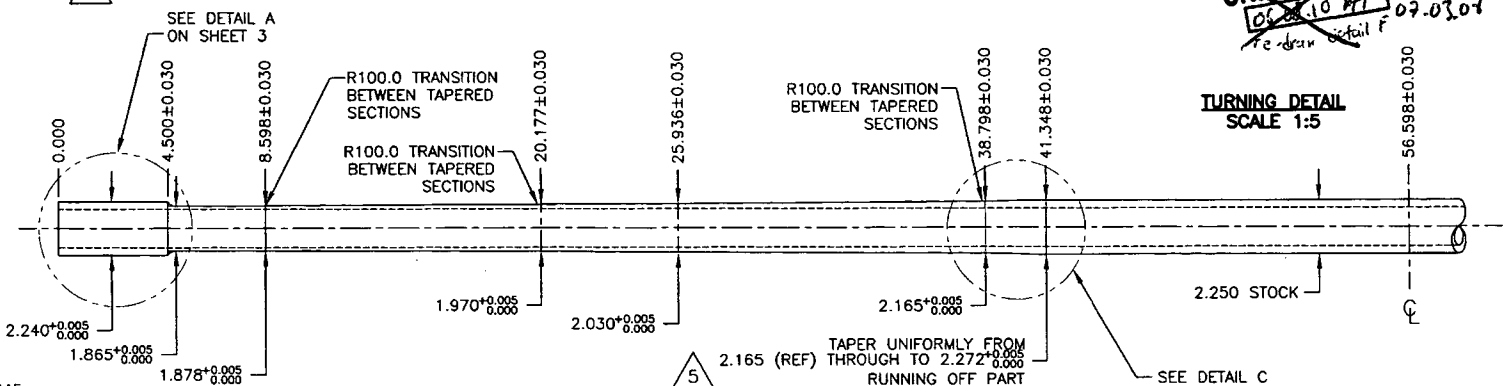
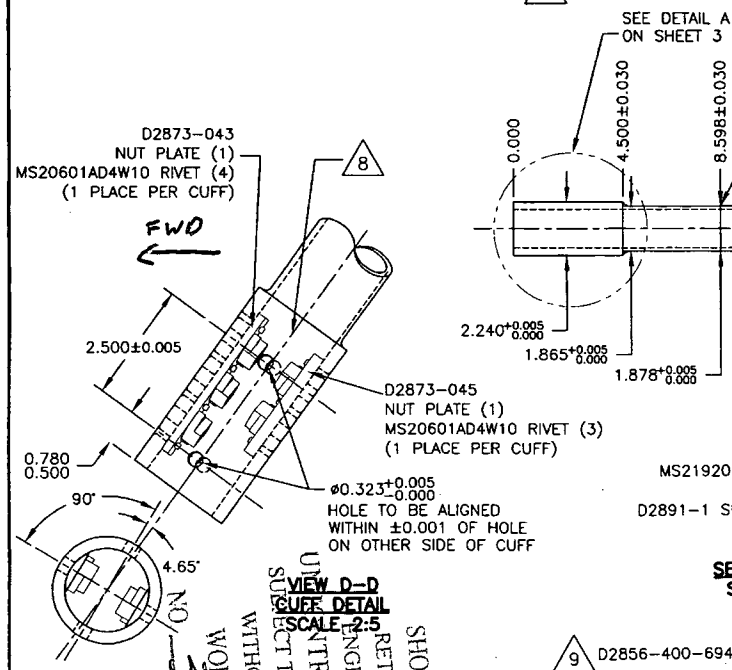
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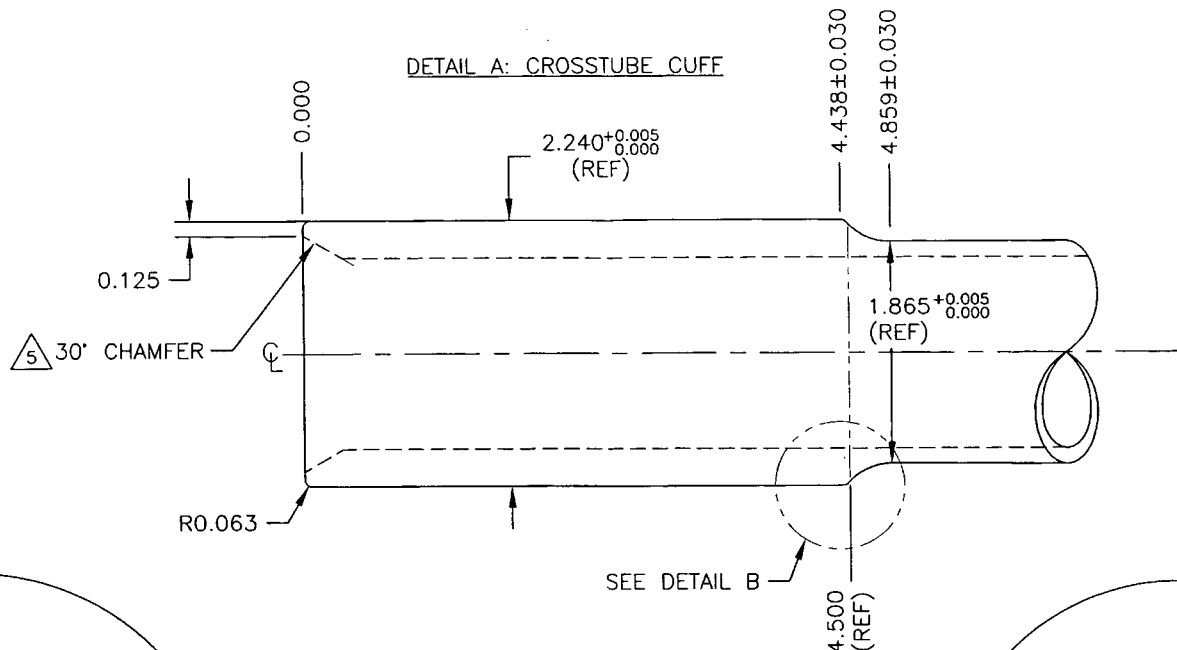


UNDER REVIEW
 05.10.07
 07.03.07



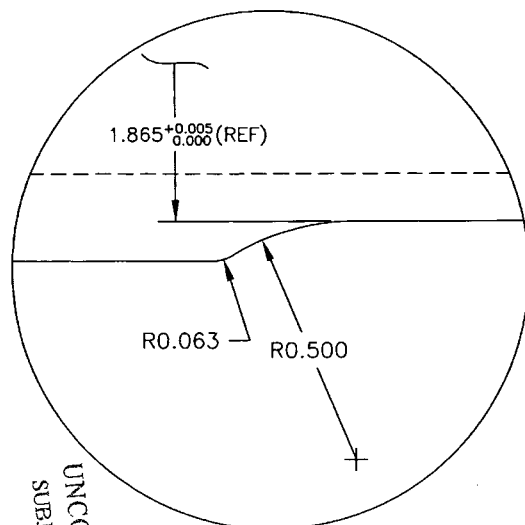
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DATE 05.07.26		TITLE CROSSTUBE ASS'Y (407 HIGH FWD)		SCALE 1:10	

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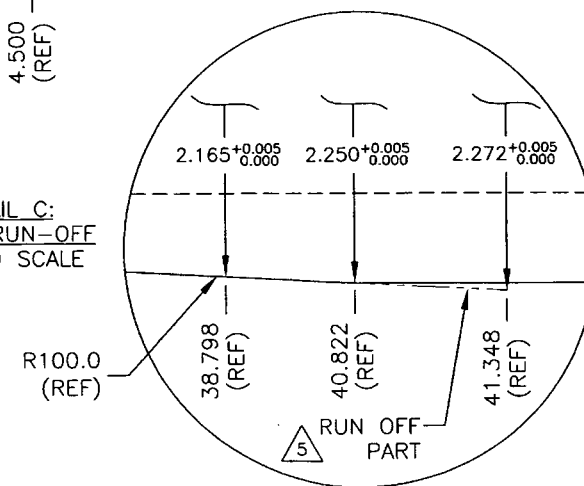
UNDER REVIEW
~~PH-07-08 PH~~
 Re-draw detail F
 PH 07.07.08

RELEASED
 05.07.26



DETAIL B: CUFF
 TRANSITION
 SCALE 4:1

DETAIL C:
 TAPER RUN-OFF
 NOT TO SCALE



NO. 31055
 WORK ORDER
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CHECKED # DS		APPROVED # DS		DRAWING NO.	REV. B
DATE		05.07.26		D407-667-145	SHEET 3 OF 3
TITLE		CROSSTUBE ASS'Y (407 HIGH FWD)		SCALE 1:1	